



Discussion

Talk about the factors that influence this force of attraction (gravitational pull).

Force – the influence exerted on a particular body. Examples of forces: wind power, which pushes sailing vessels on a lake, thrust, which causes a car to move, and the force of friction, thanks to which a ball kicked on a pitch eventually comes to a halt after some time.

The force of gravity – the interaction that occurs between two bodies – hence, two bodies act on each other through the force of gravity.

The gravitational force existing between two bodies depends, among other things, on the **distance** between them. The greater the distance between two bodies the weaker the attraction between them (when we are close to Earth the gravitational pull is greater than when we are far off in space).



Get ready for Qs

Video/ Slide show

The students watch a film and draw conclusions on how gravitational force is determined by the mass of a body.

The force of gravity also depends on the mass of the body. This means that the greater the **mass** of a body, the stronger the attraction (the Earth has a greater mass, and thus attracts us more strongly than the Moon. Larger planets have a stronger gravitational pull on us than the Earth),



Analyzing

The students use an online calculator to calculate their weight on other planets.

Get ready for Qs

Mass – this refers to the amount of matter (atoms) in a particular body. This can be shown by means of an illustration – if there are few beans at the bottom of a pot it will have less mass than if we were to fill the pot with beans right up to the top.

Weight this refers to the amount of gravitational force. When we say that a body “**weighs**” something we are referring to the force acting on it called gravity.

Conclusion: the gravitational pull (weight) of an object changes, but the mass (amount of matter) remains the same. The mass of a particular body (the amount of atoms it contains) is always constant, while the weight changes. It is said, for example, that a body weighs less on the Moon – i.e. less gravitational force acts on the body on the Moon.